

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for analyzing nitropolycyclic aromatic hydrocarbons, comprising:

an auto-sampler to which a methanol water mixture and a sample comprising nitropolycyclic aromatic hydrocarbons are sent;

a separation column downstream of the auto-sampler configured to receive the methanol water mixture and the sample from the auto-sampler and configured to separate the sample comprising nitropolycyclic aromatic hydrocarbons into at least four separate nitropolycyclic aromatic hydrocarbons including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene;

a unit for maintaining the separation column at a first predetermined temperature higher than room temperature;

a reduction column downstream of the separation column configured to receive the at least four separate nitropolycyclic aromatic hydrocarbons including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene from the separation column and to aminate the separated nitropolycyclic aromatic hydrocarbons;

a unit for maintaining the reduction column at a second predetermined temperature higher than room temperature; and

a fluorescence detector.

2. (Withdrawn and Currently Amended) An apparatus for analyzing nitropolycyclic aromatic hydrocarbons, comprising:

an auto-sampler to which a methanol water mixture and a sample comprising nitropolycyclic aromatic hydrocarbons are sent;

a separation column downstream of the auto-sampler configured to receive the methanol water mixture and the sample from the auto-sampler and configured to separate the sample containing nitropolycyclic aromatic hydrocarbons into at least four separate nitropolycyclic aromatic hydrocarbons including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene;

a unit for maintaining the separation column at a first predetermined temperature higher than room temperature;

a reduction column downstream of the separation column configured to receive the at least four separate nitropolycyclic aromatic hydrocarbons including 1-nitropyrene, 1,3-dinitropyrene, 1,6-dinitropyrene and 1,8-dinitropyrene from the separation column and to aminate the separated nitropolycyclic aromatic hydrocarbons;

a unit for maintaining the reduction column at a second predetermined temperature higher than room temperature;

an analysis column configured to separate an interfering component contained in the sample from the aminated separated nitropolycyclic aromatic hydrocarbons; and

a fluorescence detector.

3-8. (Canceled)

9. (Previously Presented) The apparatus for analyzing nitropolycyclic aromatic hydrocarbons according to claim 1, wherein the reduction column is an alumina/Pt-Rh reduction column.

10-11. (Canceled)

12. (Withdrawn) The apparatus for analyzing nitropolycyclic aromatic hydrocarbons according to claim 2, wherein the reduction column is an alumina/Pt-Rh reduction column.

13-14 (Canceled).

15. (Previously Presented) The apparatus for analyzing nitropolycyclic aromatic hydrocarbons according to claim 1, wherein the separation column is a silica gel/C8 column.

16. (Withdrawn) The apparatus for analyzing nitropolycyclic aromatic hydrocarbons according to claim 2, wherein the separation column is a silica gel/C8 column.

17. (Previously Presented) The apparatus for analyzing nitropolycyclic

aromatic hydrocarbons according to claim 1, further comprising ultrasonic generator provided upstream of the auto-sampler for applying ultrasonic waves to a mixture of diesel particulates and an organic solvent to dissolve soluble organic fractions of the diesel particulates in the organic solvent.

18. (Withdrawn) The apparatus for analyzing nitropolycyclic aromatic hydrocarbons according to claim 2, further comprising ultrasonic generator provided upstream of the auto-sampler for applying ultrasonic waves to a mixture of diesel particulates and an organic solvent to dissolve soluble organic fractions of the diesel particulates in the organic solvent.